

65 - INDEPENDENT AGENCIES - REGULATORY

407 - PUBLIC UTILITIES COMMISSION

CHAPTER 920 – MAINE MODEL BUILDING ENERGY CODE

SUMMARY: This Chapter establishes the standards that comprise the Maine Model Building Energy Code applicable to construction in Maine.

TABLE OF CONTENTS

§ 1	PURPOSE	3
§ 2	DEFINITIONS	3
§ 3	ENERGY CODE	4
A.	<u>Standards Comprising the Maine Model Building Energy Code</u>	4
1.	<u>Energy Components</u>	4
2.	<u>Ventilation Components</u>	4
B.	<u>Simplifications and Modifications</u>	4
1.	<u>Climate Zones</u>	5
2.	<u>Glazing Tables</u>	5
3.	<u>Prescriptive Tables</u>	5
§ 4	APPLICABILITY	5
A.	<u>Types of Buildings</u>	5
B.	<u>Types of Construction</u>	6
1.	<u>New Construction</u>	6
2.	<u>Additions</u>	6
3.	<u>Alterations, Renovations and Repairs</u>	6
4.	<u>Renovations to Commercial Buildings</u>	6

5.	<u>Change in Occupancy</u>	6
§ 5	OTHER CODES AND STANDARDS	6
§ 6	ADOPTION	7
§ 7	INTERPRETATION OF THE MAINE MODEL BUILDING ENERGY CODE	7
§ 8	WAIVER OR EXEMPTION	7
	APPENDIX A - SIMPLIFIED PRESCRIPTIVE TABLES	10

§ 1 PURPOSE

The purpose of this Chapter is to implement 35-A M.R.S.A. §121 by defining the components of the Maine Model Building Energy Code that shall apply to construction practices that affect the energy use and indoor air quality of buildings in Maine.

§ 2 DEFINITIONS

A. ASHRAE. “ASHRAE” means the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.

B. ASHRAE 62-2001. “ASHRAE 62-2001” means the standard adopted by ASHRAE in 2001 for ventilation practices in building construction, entitled “Ventilation for Acceptable Indoor Air Quality”.

C. ASHRAE 62.2-2003. “ASHRAE 62.2-2003” means the standard adopted by ASHRAE in 2003 for ventilation practices in residential low-rise building construction, entitled “Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings.”

D. ASHRAE 90.1-2001. “ASHRAE 90.1-2001” means the standard adopted by ASHRAE in 2001 for energy efficiency practices in commercial building construction, entitled “Energy Standard for Buildings Except Low-Rise Residential Buildings.”

E. IBC-2003. “IBC-2003” means the International Building Code adopted by the ICC in 2003.

F. Commercial building. “Commercial building” means any building that is not a residential or industrial building.

G. ICC. “ICC” means the International Code Council.

H. IECC-2003. “IECC-2003” means the International Energy Conservation Code adopted by the ICC in 2003.

I. IRC-2003. “IRC-2003” means the International Residential Code for One- and Two-Family Dwellings adopted by the ICC in 2003.

J. Industrial building. “Industrial building” means a building that houses an operation that manufactures tangible personal property by physical, chemical or other means. The operation encompasses those classified by the U.S. Department of Commerce with any standard industrial code of 20 through 39.

K. Modular housing. "Modular housing" means the type of manufactured housing defined in §9002(7)(B) in the Maine Manufactured Housing Act, 10 M.R.S.A. §§9001-9090.

L. Residential building. "Residential building" means:

- i. a detached one- or two-family dwelling,
- ii. a dwelling in a group of single-family dwellings that is not more than three stories in height, with a separate means of egress,
- iii. a group of more than two dwelling units where the occupants are primarily permanent in nature, and which are three stories or less in height,
- iv. buildings arranged for occupancy as residential care or assisted living facilities for more than five but not more than 16 occupants, and which are three stories or less in height, and
- v. accessory structures to buildings described in (i) through (iv).

§3 ENERGY CODE

A. Standards Comprising the Maine Model Building Energy Code.

Except as provided in sections 3(B), 4(B), and 5, the Maine Model Building Energy Code shall consist of:

1. Energy components
 - a. IECC-2003;
 - b. Chapter 11 of IRC-2003;
 - c. Chapter 13 of IBC-2003; and
 - d. ASHRAE 90.1-2001.
2. Ventilation components
 - a. ASHRAE 62-2001; and
 - b. ASHRAE 62.2-2003.

B. Simplifications and Modifications.

Notwithstanding any requirements in the standards contained in section 3(A), the following procedures are incorporated as part of the Maine Model Building Energy Code. This does not prohibit a builder from complying with the Maine Model Building Energy Code by meeting the standards through any method specified in IECC-2003 and Chapter 11 of IRC-2003.

1. Climate zones. Residential construction that complies with the requirements for the following climate zones constitutes compliance with the Maine Model Building Energy Code:

- a. Zone 17 in Aroostook County.
- b. Zone 15 in all remaining locations.

2. Glazing tables. Residential construction that complies with the IECC-2003 and IRC-2003 standards applicable to buildings with 15% glazing constitutes compliance with the Maine Model Building Energy Code.

3. Prescriptive tables. Residential construction that complies with the Simplified Prescriptive Tables contained in Appendix A constitutes compliance with the Maine Model Building Energy Code.

§4 APPLICABILITY

A. Types of buildings.

1. Residential buildings. Subject to the adoption procedures established in section 6, the standards applicable to residential construction shall be the IRC-2003 Chapter 11 and IECC-2003 energy standards and the ASHRAE 62.2-2003 ventilation standards.

2. Commercial buildings. The standards applicable to commercial construction shall be the ASHRAE 90.1-2001, IBC-2003 Chapter 13, and IECC-2003 energy standards and the ASHRAE 62-2001 ventilation standards.

3. Industrial buildings. Subject to the adoption procedures established in section 6, the standards applicable to the portions of industrial buildings that are designed primarily for human occupancy other than manufacturing or production shall be the ASHRAE 90.1-2001, IBC-2003 Chapter 13, and IECC-2003 energy standards and the ASHRAE 62-2001 ventilation standards.

4. Modular housing. Until the Maine Manufactured Housing Board has established energy and ventilation requirements in accordance with 10 M.R.S.A. §9042(1) governing the construction of modular homes sold in Maine, the Maine Model Building Energy Code is applicable to the construction of modular housing.

B. Types of construction.

1. New construction. The Maine Model Building Energy Code is applicable to the construction of new residential buildings.
2. Additions. The energy components of the Maine Model Building Energy Code are applicable to the construction of additions to residential buildings. The ventilation components of the Maine Model Building Energy Code are not applicable to the construction of additions to residential buildings.
3. Alterations, renovations and repairs to residential buildings. The energy components of the Maine Model Building Energy Code are applicable to alterations, renovations, and repairs to residential buildings, except that the following exceptions apply provided the energy use of the existing building is not increased as a result of the alterations, renovations, or repairs:
 - a. Storm windows and doors installed over existing windows and doors;
 - b. Glass only in-kind replacement in existing sash and frames;
 - c. Existing ceiling, wall and floor cavities exposed during construction provided these cavities are filled with insulation; and
 - d. Construction where the existing roof cavity, wall cavity or floor cavity is not exposed.The ventilation components of the Maine Model Building Energy Code are not applicable to alterations, renovations, and repairs to residential buildings.
4. Renovations to commercial buildings. The Maine Model Building Energy Code is not applicable to renovations to commercial buildings whose cost does not exceed 50% of the building's current value prior to renovation.
5. Change in occupancy. The Maine Model Building Energy Code is not applicable to a change in the occupancy of a building.

§5 OTHER CODES AND STANDARDS

If a requirement of the Maine Model Building Energy Code conflicts with any law, regulation, or standard listed in this Section, the standard in the Maine Model Building Energy Code is not applicable:

- A. Fire safety standards adopted pursuant to M.R.S.A. Title 25.

- B. Electrical standards adopted pursuant to M.R.S.A. Title 32 or Title 35-A.
- C. Plumbing standards adopted pursuant to M.R.S.A. Title 32.
- D. Oil and solid fuel burning equipment standards adopted pursuant to M.R.S.A. Title 32.
- E. Propane and natural gas equipment standards adopted pursuant to M.R.S.A. Title 32.
- F. Boiler and pressure vessel standards adopted pursuant to M.R.S.A. Title 32.
- G. Elevator standards adopted pursuant to M.R.S.A. Title 32.

§6 ADOPTION

A municipality may not adopt an energy code other than the Maine Model Building Energy Code. Nothing in this Chapter requires a municipality to adopt an energy code. A municipality that has an energy code in effect prior to the effective date of this Chapter may continue to keep that code, but if the municipality replaces its energy code it must adopt the Maine Model Building Energy Code described in this Chapter. Notwithstanding this provision, all commercial construction is subject to the requirements of 10 M.R.S.A. § 1415-D.

§7 INTERPRETATION OF THE MAINE MODEL BUILDING ENERGY CODE

Any person may request an Advisory Opinion from the Public Utilities Commission regarding the interpretation of any standard contained in the Maine Model Building Energy Code.

§ 8 WAIVER OR EXEMPTION

Upon the request of any person subject to this Chapter or upon its own motion, the Commission may, for good cause, waive any requirement of this Chapter that is not required by statute. The waiver may not be inconsistent with the purposes of this Chapter, Title 35-A, or Title 10. The Commission, the Director of Energy Services, or the presiding officer assigned to a proceeding related to this Chapter may grant the waiver.

BASIS STATEMENT: The factual and policy basis for this rule is set forth in the Commission's Order Provisionally Adopting Rule, Docket No. 2004-521, issued on March 31, 2005. Copies of this Statement and Order have been filed with this rule at the Office of the Secretary of State. Copies may also be obtained from the Administrative Director, Public Utilities Commission, 242 State Street, 18 State House Station, Augusta, Maine 04333-0018.

AUTHORITY: 35-A M.R.S.A. §§ 104, 111, 1301; P.L. 2003 ch. 645.

EFFECTIVE DATE: This rule was approved as to form and legality by the Attorney General on _____. It was filed with the Secretary of State on _____ and will be effective on _____.

Appendix A Simplified Prescriptive Tables for Residential Buildings

Compliance with one of the following standards packages shall constitute compliance with the energy component of the Maine Model Building Energy Code

Climate Zone 1 – all locations except Aroostook County

<i>Climate Zone</i>	<i>Glaze U-factor (windows or doors)</i>	<i>Ceiling R-value</i>	<i>Wall R-value</i>	<i>Floor R-value</i>	<i>Basement Wall R-value</i>	<i>Slab R-value and perimeter</i>	<i>Crawl space R-value</i>	<i>Furnace or boiler efficiency</i>
Package #1	.35	38	19	21	10	10 4'	20	80 AFUE
Package #2	.40	38	21	21	10	10 4'	20	82 AFUE
Package #3	.40	49	21	21	10	10 4'	20	80 AFUE

Climate Zone 2 – Aroostook County

<i>Climate Zone</i>	<i>Glaze U-factor (windows or doors)</i>	<i>Ceiling R-value</i>	<i>Wall R-value</i>	<i>Floor R-value</i>	<i>Basement Wall R-value</i>	<i>Slab R-value and perimeter</i>	<i>Crawl space R-value</i>	<i>Furnace or boiler efficiency</i>
Package #1	.35	38	19	21	10	10 4'	20	85 AFUE
Package #2	.40	38	21	21	10	10 4'	20	86 AFUE
Package #3	.32	49	21	21	10	10 4'	20	83 AFUE

Buildings may also comply with the Maine Model Building Energy Code by complying with the IECC-2003 or IRC-2003 through any means available in those standards, including trade-off analysis performed with REScheck®.